Message

From: Grange, Gabrielle Fenix [Gabrielle.Grange@doh.hawaii.gov]
Sent: 2/7/2018 9:43:01 PM
To: TU, LYNDSEY [Tu.Lyndsey@epa.gov]
CC: Matt Tonkin [matt@sspa.com]; Linder, Steven [Linder.Steven@epa.gov]
Subject: FW: DRAFT LNAPL Slides - Scope Items 6 and 7
Attachments: LNAPL_fractures.pdf

Thanks, I am forwarding to our EPA partners as well. GD reviewed the slides separately with Bob and me yesterday.

Lyndsey, Matt and Steve,

Let us know if you have questions/concerns or comments.

Fenix

From: G D Beckett [mailto:g.d.beckett@aquiver.com]
Sent: Wednesday, February 7, 2018 8:11 AM
To: Grange, Gabrielle Fenix <Gabrielle.Grange@doh.hawaii.gov>
Cc: Donald Thomas <dthomas@soest.hawaii.edu>; Ichinotsubo, Lene K <lene.ichinotsubo@doh.hawaii.gov>; Whittier, Robert <Robert.Whittier@doh.hawaii.gov>
Subject: DRAFT LNAPL Slides - Scope Items 6 and 7

Good morning folks,

Fenix asked me to send out a draft of my LNAPL transport slide deck. Admittedly, many won't make sense without the discussion around them, but the general theme is this: The current LCSM by the Navy is far to simplistic, and that simplicity causes it to be non-conservative. Lab and real-world observations indicate LNAPL will move in complex directions and not in a vertical layer-cake that absorbs some percentage as the NAPL passes through.

The final block of slides are several different indicators of NAPL at depth, and potentially impacting the aquifer from past releases (2014 & prior). As Bob has observed, the data of potential impacts tend to be to the northwest and unfortunately toward the Halawa Valleys. This, among other things, is directly at odds with the Navy's current LCSM. I will note during the discussion the limitations of the Halawa deep monitoring well in particular, but the totality of the data point in a similar direction (literally and philosophically).

I will probably cut slide 3 (fracture LCSM table), but leave it for now for your review. Slide 7 has the ITRC fracture schematic that can be used to discuss the same things. Slide 8, an animation, won't play in PDF but shows the transience of LNAPL movement based on numerical multiphase simulation.

Best regards.

G.D. Beckett, RG, CHg
Principal Hydrogeologist

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